In the Claims

1-23. (Cancelled)

24. (Currently Amended) A method of analysing a library of polynucleotides, said polynucleotides being contained in cloning vectors having a particular host range, the method comprising (i) selecting cloning vectors in the library which contain a polynucleotide having a particular characteristic,

(ii) inserting a target polynucleotide construct into said selected cloning vectors in a region of said selected cloning vectors distinct from the polynucleotide having a particular characteristic, wherein said target polynucleotide construct comprises a nucleic acid encoding a functional origin of transfer and a nucleic acid encoding an integrase functional in a selected recipient host cell, thereby conferring to the modified cloning vectors the ability to be transferred into a selected recipient host cell,

(iii) transferring said modified cloning vectors of step (ii) in the selected recipient host cell, thereby integrating said modified cloning vectors and/or the polynucleotide having a particular characteristic which they contain into a chromosome of said selected recipient host cell, and

(iv) analysing the polynucleotide having a particular characteristic transferred into said selected recipient host cell and integrated in its chromosome by determining the phenotype or properties of said selected recipient host cell containing said polynucleotide.

25. (Previously Presented) The method of claim 24, wherein the library comprises a plurality of unknown polynucleotides.

26. (Previously Presented) The method of claim 24, wherein the library comprises a plurality of environmental DNA fragments.

27. (Previously Presented) The method of claim 24, wherein the cloning vectors of the library are *E. coli* cloning vectors.

28-30. (Canceled)

31. (Previously Presented) The method of claim 24, wherein the origin of transfer is functional in *E. coli* host cells.

32. (Previously Presented) The method of claim 31, wherein the origin of transfer is an origin of transfer contained in a plasmid selected from the group consisting of RP4, pTiC58, F, RSF1010 and R6K(α).

33. (Canceled)

34. (Previously Presented) The method of claim 24, wherein the integrase is ϕC31 integrase.

35. (Previously Presented) The method of claim 24, wherein the target polynucleotide construct comprises a transcriptional promoter functional in the recipient selected host cell.

36. (Previously Presented) The method of claim 24, wherein the target polynucleotide construct is contained in a transposable nucleic acid construct.

37. (Currently Amended) The method of claim 36, wherein the transposable nucleic acid ~~comprises,~~ comprises: two inverted repeats, the target polynucleotide construct and a marker gene, said inverted repeats flanking the target polynucleotide construct and the marker gene.

38. (Currently Amended) The method of claim 24, wherein the cloning vectors comprise a first marker gene and wherein, in step ii), the selected cloning vectors are modified by:

contacting in vitro, in the presence of a transposase, the selected cloning vectors with a transposon ~~comprising,~~ comprising: two inverted repeats, the target polynucleotide construct and a

second marker gene distinct from the first marker gene, with inverted repeats flanking the target polynucleotide construct and the second marker gene, and

selecting the cloning vectors which have acquired the second marker gene and which have lost the first marker gene.

39. (Previously Presented) The method of claim 24, wherein, in step (i), the cloning vectors which contain a polynucleotide having a particular characteristic are selected by molecular screening.

40. (Previously Presented) The method of claim 24, wherein, in step (iii), the modified cloning vectors are transferred into the selected recipient host cell by conjugative transfer.

41. (Canceled)

42. (Currently Amended) A method for the identification or cloning of polynucleotides encoding a selected phenotype, the method comprising (i) cloning environmental DNA fragments into *E.coli* cloning vectors to produce a metagenomic library, (ii) identifying or selecting cloning vectors in said library which contain DNA fragments having a particular characteristic of interest, (iii) inserting a target polynucleotide construct into said identified or selected cloning vectors in a region of said identified or selected cloning vectors distinct from the DNA fragments having a particular characteristic of interest, wherein said target polynucleotide construct comprises a nucleic acid encoding a functional origin of transfer and a nucleic acid encoding an integrase functional in a selected recipient host cell, thereby conferring to the modified cloning vectors the ability to be transferred into a selected recipient host cell, (iv) transferring the modified cloning vectors into said selected recipient host cell, thereby integrating said modified cloning vectors and/or the DNA fragments having a particular characteristic of interest which they contain into a chromosome of said selected recipient host cell and (v) identifying or cloning the DNA fragments contained in said modified cloning vectors which encode said selected phenotype in said selected recipient host cell.

43-46. (Canceled)

47. (Previously Presented) The method of claim 27, wherein the cloning vectors are selected from the group consisting of a cosmid, a fosmid, P1 and BAC vectors.

48. (New) A method for the identification or cloning of polynucleotides encoding a selected phenotype, the method comprising (i) cloning environmental DNA fragments into *E.coli* cloning vectors to produce a metagenomic library, (ii) identifying or selecting cloning vectors in said library which contain DNA fragments having a particular characteristic of interest, (iii) inserting a target polynucleotide construct into said identified or selected cloning vectors in a region of said identified or selected cloning vectors distinct from the DNA fragments having a particular characteristic of interest, wherein said target polynucleotide construct comprises a nucleic acid encoding a functional origin of transfer and a nucleic acid encoding an integrase functional in a selected recipient host cell having a genome distinct from *E. coli*, thereby conferring to the modified cloning vectors the ability to be transferred into said selected recipient host cell, (iv) transferring the modified cloning vectors into said selected recipient host cell and integrating said modified cloning vectors and/or the DNA fragments having a particular characteristic of interest which they contain into the genome of said selected recipient host cell and (v) identifying or cloning the DNA fragments contained in said modified cloning vectors which encode said selected phenotype in said selected recipient host cell.

49. (New) The method of claim 48, wherein the cloning vectors are selected from the group consisting of a cosmid, a fosmid, P1 and BAC vectors.